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the longitude being measured from what Hansen supposed to be the mean equinoctial point, and the unit of time being what Hansen supposed to be the Julian year of 365·25 mean solar days.

Mr. Stone, as I understand him, contends that for the same instant of time the two points are one and the same point. If so, it seems to me that Hansen's formula must be a mere analytical transformation of Bessel's, and the question would arise, Why was any change made? My contention is that the points are not one and the same point; and in support I show that, assuming them to be so, we obtain two inconsistent values for the time of the Earth's rotation. As a theoretical definition of the mean Sun, I agree that "The only mean Sun known to astronomers is an imaginary body which moves uniformly in the equator at such a rate that the difference between its Right Ascension and that of the true Sun consists wholly of periodic quantities." But in astronomy there is no such thing as absolute accuracy; and I contend that neither Bessel's mean Sun nor Hansen's mean Sun is absolutely identical with the mean Sun as thus defined.

The Belts of Saturn. By Henry Pratt.

Inquiry was made at the last meeting by Mr. Ranyard whether a narrow belt on *Saturn* had been seen by others than himself. And from the reports of the meeting in the *Observatory* and *Astronomical Register* I have no doubt he referred to a narrow belt which I also saw on several occasions in October, while making observations of the inner satellites; and again on Nov. 6 and 28, while preparing to photograph the planet, I repeated the view of the same object; but it was only to identify it as a portion of features familiar to me for many years.

For the sake of clearness, I shortly describe the whole belt system, so far as it is rendered by my With speculum of 8·15-in. aperture.

The belts of the two hemispheres are, in general arrangement, usually similar and symmetrical. On both sides of the equator similar alternations of colour and proportion are usually seen. For some distance on each side of the equator extends a zone which is usually free from any markings whatever, showing only a creamy-yellow tint. At a latitude of, roughly, about 10° occurs a strong belt, narrow, sharply defined on its equatorial side, but diffused on its polar side, and gathered in places into wispy knots and curved markings. The colour of this I always see as Vandyke brown. This narrow belt is the deepest tint of all the markings on the globe; and when our atmosphere is not perfectly translucent, it is almost or quite the only detail which can be seen. So far as I can understand, this narrow belt was the subject of discussion at the last meeting. The polar side of this brown belt and its wispy curves is softened into a narrow

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zone of cream tint, which again merges into one of very pale rose-madder, which ends in a moderately sharp boundary, about latitude 25°. This is followed by a zone a few degrees in width, and of cream tint; and about latitude 40° commences a double belt, very pale rose-madder in tint, the space between them being of cream tint, and the belt highest in latitude being the broadest of the two. In turn this is followed by a zone of cream tint until the polar cap of bluish-white is reached.

Of course, in speaking of colours only faint tints are to be understood throughout the above description. I did not see the whole of these features during October, simply because I did not look for them all, but on three occasions I observed the greater portion of the detail mentioned, and by that means ensured the correct identification of the narrow belt to which Mr. Ranyard referred.

The photograph* accompanying this paper illustrates the belt system described, and is a reduced copy of a water-colour drawing which I made at my telescope on 1874 Sept. 14; and on numberless occasions since then I have re-observed the same features.

18 Preston St., Brighton:
1884, *Jan.* 10.

Note accompanying a Sketch of the Great Comet (b) 1882.
By Gen. G. H. Willis.

(*Extract from a letter to Mr. Stone.*)

I send you the sketch of the appearance of the comet of last year on the morning of October 19.

The air was extremely clear at the time, and the wind was nearly calm.

I watched the comet for some twenty minutes, until the increasing light of dawn obliterated the dark circle round it. During this time I got my field-glasses to observe with, but I found that the dark part was not so distinct through them. I then got a powerful ship's telescope, but with it the dark shade almost entirely disappeared, except on the right, or darker, side, where it remained slightly visible.

The appearance was so extremely delicate, light, and airy that it would be almost impossible to depict it on paper.

41 Eaton Place, S.W.:
1883, *Nov.* 15.

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* The Photograph is placed in the Society's Library.

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